

NASA Technical Memorandum 86249

**A Bibliography of Planetary
Geology Principal Investigators
and Their Associates, 1982-1983**

AUGUST 1984

LIBRARY COPY

AUG 11 1984

BRIDGES RESEARCH CENTER

LIBRARY COPY

1984

NASA

NASA Technical Memorandum 86249

**A Bibliography of Planetary
Geology Principal Investigators
and Their Associates, 1982-1983**

*J. B. Plescia, Compiler
Jet Propulsion Laboratory
California Institute of Technology
Pasadena, California*



National Aeronautics
and Space Administration

Scientific and Technical
Information Branch

1984

Contents

	<i>Page</i>
General Interest Topics	1
Solar System, Comets, Asteroids, Meteorites, and Small Bodies	3
Geologic Mapping, Geomorphology, and Stratigraphy	5
Structure, Tectonics, and Planetary and Satellite Evolutions	8
Impact Craters: Occurrence, Modeling, and Geologic Studies	11
Volcanism	14
Fluvial, Mass Wasting, Glacial, and Periglacial Studies	18
Eolian and Arid Climate Studies.....	21
Regolith, Volatiles, Atmosphere, and Climate Studies.....	24
Radar	26
Remote Sensing and Photometric Studies	28
Cartography, Photogrammetry, Geodesy, and Altimetry.....	31
Author Index	28

General Interest Topics

Baskerville, C. A.: Computer Enhancement as an Aid to the Interpretation of Geologic Features on Viking Imagery: A Preliminary Progress Report. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 307-308.

Bolef, L. K.: Image Storage and Display Using Consumer Video Technology. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 392-393.

Bolef, L. K.; Guinness, E. A.; and Arvidson, R. E.: BIRP—A Way to Search Through Image Engineering Data. IEEE Trans. Geosci. Remote Sensing, vol. GE-20, 1982, pp. 378-383.

Carr, M. H.: The Surface of Mars. Yale Univ. Press, 1981.

Carr, M. H.: The Surface of Mars: A Post-Viking View: Mercury. J. Astron. Soc. Pac., vol. 12, no. 1, 1983, pp. 2-15.

El-Baz, F.: Science Leads Art—Views of the Planets From Space. (Abstract.) 148th Annual Meeting, Amer. Ass. Advan. Sci., 1982, p. 10.

Garvin, J. B.; Head, J. W.; and Basilevsky, A. T.: Size Frequency Analysis of Fragments in Venera 13 and 14 Panoramas of Venus. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 237-238.

Garvin, J. B.; Helfenstein, P.; and Zuber, M. T.: Transformation of Venera 13 and 14 Panoramas into Viking Lander Perspective. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 241-242.

Greeley, R.: Planetary Geology Speakers Bureau: The Second Year. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 398-399.

Guinness, E. A.; and Arvidson, R. E.: New Method for Detecting Contrast Changes at the Mutch Memorial Station. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 182-184.

Guinness, E. A.; Leff, C. E.; and Arvidson, R. E.: Two Years of Surface Changes Seen at the Viking Landing Sites. J. Geophys. Res., vol. 87, 1982, pp. 10,051-10,058.

Head, J. W.: Unanswered Questions About the Moon From a Geological Point of View. (Abstract.) 9th Annual Meeting, Eur. Geophys. Soc. and 18th Gen. Assem. Eur. Seismol. Com., Univ. of Leeds, U.K., 1982, p. 94. (Also in Eos, vol. 63, no. 51, p. 1294.)

Huguenin, R. L.: Mars: A Contamination Potential? XXIVth COSPAR Workshop III, May 27, 1982.

Martin, Michael D.; and Saunders, R. S.: Interfacing Videodisc Players and Microcomputers. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 411-412.

Masursky, Harold: Mars. The New Solar System. J. K. Beatty, Brian O'Leary, and Andrew Chaiken, eds., 2d ed., Sky Pub. Corp. (Cambridge, MA), 1982, pp. 83-92.

Maxwell, T. A.: Collection and Analysis of Image Data for Interpretation of Planetary Tectonic History. Computers in Research at the Smithsonian, Office of Computer Services, Smithsonian Institution (Washington, DC), 1982, p. 31.

Miller, K. J.; Leschine, S. B.; and Huguenin, R. L.: Halotolerant-Psychrotolerant Bacteria From Saline Dry Valley Antarctic Soils. XXIVth COSPAR Workshop III, May 27, 1982.

Roe, Derek A.; Olsen, John W.; Underwood, James R., Jr.; and Giegengack, R.: A Handaxe of Libyan Desert Glass. *Antiquity*, vol. LVI, 1982, pp. 88–92.

Sheridan, M. F.: Particles Formed by Fuel-Coolant Explosions. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 167–168.

Smith, B. A.; Soderblom, L.; Batson, R.; Bridges, P.; Inge, J.; Masursky, H.; Shoemaker, E.; Beebe, R.; Boyce, J.; Briggs, G.; Bunker, A.; Collins, S. A.; Hansen, C. J.; Johnson, T. V.; Mitchell, J. L.; Terrile, R. J.; Cook, A. F.; Cuzzi, J.; Pollack, J. B.; Danielson, G. E.; Ingersoll, A.; Davies, M. E.; Hunt, G. E.; Morrison, D.; Owen, T.; Sagan, C.; Veverka, J.; Strom, R.; and Suomi, V. E.: A New Look at the Saturn System: The Voyager 2 Images. *Science*, vol. 215, 1982, p. 504.

Squyres, S. W.; Dyal, P.; Haberle, R. M.; Jackson, R. W.; Murphy, J. P.; and Reynolds, R. T.: Recent Study in Support of a Mars Network Mission. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1983, pp. 382–384.

Squyres, S. W.; Reynolds, R. T.; and Colburn, D. S.: On the Habitability of Europa. (Abstract.) *Eos*, vol. 63, 1982, p. 1022.

Wall, S. D.: Viking Lander Monitor Mission Imaging Investigation Status Report. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982.

Wilhelms, D. E.: Future Unmanned Lunar Spaceflights. (Abstract.) *Lunar Planet. Sci. Conf. 14*, Lunar Planet. Inst., 1983, pp. 32–33.

Williams, R. S., Jr., ed.: Geological Applications. Ch. 31 of *Manual of Remote Sensing*, 2d ed., Amer. Soc. Photogram. (Falls Church, VA), 1983. (Includes section on Astrogeology by Drs. Elliot C. Morris and Baerbel K. Lucchitta.)

Solar System, Comets, Asteroids, Meteorites, and Small Bodies

Ashwal, L.; Warner, J.; and Wood, C. A.: SNC Meteorites: Evidence Against an Asteroidal Origin. (Abstract.) Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 22–23.

Ashwal, L. D.; Warner, J. L.; and Wood, C. A.: SNC Meteorites: Evidence Against an Asteroidal Origin. Lunar Planet. Sci. Conf. 13, J. Geophys. Res. Suppl., 1982, pp. A393–A400.

Atallah, C.; Bus, S. J.; Dunbar, R. S.; Quimby, L.; Child, J.; and Helin, E.: Observations Made With a 1.2m Schmidt Telescope at Palomar. Minor Planet Circ. Nos. 6597–6598, 1982.

Bus, S. J.; and Bus, E. H.: Observations of 1982XB. Int. Astron. Union Circ. No. 3761, 1983.

Bus, S. J.; Helin, E. F.; Dunbar, R. S.; and Shoemaker, E. M.: The United Kingdom-Caltech Asteroid Survey. (Extended abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982.

Dawe, J.; Barrow, J.; Hartley, M.; Morgan, D.; Russell, K.; Savage, A.; Helin, E.; Shoemaker, E.; Bus, S. J.; and Dunbar, R. S.: Observations Made With 1.2m U.K. Schmidt Telescope at Siding Spring. Minor Planet Circ. Nos. 7087–7104, 7317–7332, 7405–7428, and 7535–7557, 1982.

Dunbar, R. S.: Measurements of 1982XB. Int. Astron. Union Circ. Nos. 3754–3755, 1982.

Dunbar, R. S.; and Bus, S. J.: Photometric Observations of 1982TA. Int. Astron. Union Circ. No. 3738, 1982.

French, L.; and Veverka, J.: Limb Darkening of Meteorites and Asteroids. Icarus, vol. 54, 1982, p. 38.

Hartmann, Wm. K.: Dirty-Ice Materials of Comets Inferred From VJHK Visual/Infrared Observations. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983.

Hartmann, Wm. K.; Cruikshank, D.; and Degewij, J.: Remote Comets and Related Bodies: VJHK Colorimetry and Surface Materials. Icarus, vol. 52, 1982, pp. 377–408.

Helin, Eleanor F.: Discovering an Asteroid (1982DB). The Planetary Report, vol. II, no. 4, 1982.

Helin, Eleanor F.: The Case of the Disappearing Asteroid. The Planetary Report, vol. II, no. 6, 1982.

Helin, Eleanor F.: Earth-Crossing Asteroids: New Discoveries. Sun and Planetary System. W. Fricke and G. Teleki, eds., D Reidel Publishing Co., 1982.

Helin, E.: 1982RA, Int. Astron. Union Circ. No. 3726, 1982.

Helin, E.: 1982TA, Int. Astron. Union Circ. No. 3736, 1982.

Helin, E.: 1982XB, Int. Astron. Union Circ. No. 3754, 1982.

Helin, E.: 1982XB, Int. Astron. Union Circ. No. 3755, 1982.

Helin, E. F.; and Dunbar, R. S.: Observations of 1982DB. Int. Astron. Union Circ. No. 3669, 1982.

Helin, E.; Dunbar, R. S.; and Shoemaker, C. S.: Observations Made With 1.2m Schmidt Telescope. Minor Planet Circ. No. 6675, 1982.

Helin, E. F.; Dunbar, R. S.; and Williams, J. G.: 1981VA: A New Apollo Asteroid. (Abstract.) Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982.

- Helin, E. F.; and Hulkower, N. D.: Accessible Earth-Crossing Asteroids. Bull. Amer. Astron. Soc., vol. 14, no. 4, 1982.
- Helin, E. F.; and Shoemaker, E. M.: Discovery of 1982DB. Int. Astron. Union Circ. No. 3675, 1982.
- Helin, E.; Shoemaker, E.; and Dunbar, R. S.: Observations of Asteroids and Comets. Minor Planet. Circ. Nos. 6656–6658, 1982.
- Shoemaker, C. S.; Bus, S. J.; and Howell, E.: 1982DA. Int. Astron. Union Circ. Nos. 3669 and 3673, 1982.
- Shoemaker, C. S.; and Shoemaker, E. M.: Orbits of (2686) 1981JW, (2742) 1981JG₃, and (2748) 1981JF₂, Discovered With the .46m Schmidt at Palomar. Minor Planet Circ. Nos. 7014, 7229, and 7232, 1982.
- Shoemaker, C. S.; Shoemaker, E. M.; Bus, S. J.; and Passey, Q. R.: Observations Made With the .46m Schmidt Telescope at Palomar. Minor Planet Circ. Nos. 6595–6597, 6674, 6862, 7111, 7202–7203, 7433, and 7562–7563, 1982.
- Shoemaker, C. S.; and Shoemaker, E. M.: 1982RA. Int. Astron. Union Circ. No. 3726, 1982.
- Underwood, J. R.; Geigengack, R. F.; and Malvin, D. J.: Quarat al Hanish: Iron Meteorite From Western Desert of Egypt. (Abstract.) 45th Annual Meeting, Meteorit. Soc. Lunar Planet. Inst. contribution 481, 1982, p. IV–8.
- Wood, C. A.: Fall Statistics of H. Chondrites: Evidence for Cometary Origins for Ordinary Chondrites. (Abstract.) Lunar Planet. Sci. 13, Lunar Planet. Inst., 1982, pp. 873–874.
- Wood, C. A.; and Mendell, W. W.: Comets, Asteroids, Meteorites and Meteors: A New Paradigm of Interrelations. (Abstract.) Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 877–878.

Geologic Mapping, Geomorphology, and Stratigraphy

Bousquet, B.; and Bodart-Jourdain, J.: Valles Marineris—cartographie et analyse morphologique des pentes. (Abstract.) Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG, Paris, 1982, pp. 191–192.

Bousquet, B.; and Rogeon, P.: Maja Vallis—cartographie et origine morphologique d'un réseau de chenaux d'écoulement. (Abstract.) Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG, Paris, 1982, pp. 182–184.

Casacchia, R.; and Strom, R. G.: Geology of Galileo Regio, Ganymede. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, p. 92.

De Hon, R. A.: Preliminary Geologic Map of the South Polar Region of Ganymede. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 349–351.

Ehmann, W. J.; and Head, J. W.: Aphrodite Terra, Venus: Characteristics of Geologic Provinces. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 171–172.

Ehmann, W. J.; and Head, J. W.: Morphology and Topography of Aphrodite Terra, Venus. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982.

Goldstein, A. G.; and Wise, D. U.: W. H. Hobbs Revisited: Fracture and Lineament Studies in Southwestern New England. Northeast. Geol., vol. 4, 1982, pp. 73–80.

Golombek, M. P.: Geology, Structure, and Tectonics of the Pajarito Fault Zone in the Española Basin of the Rio Grande Rift, New Mexico. Geol. Soc. Amer. Bull., vol. 94, 1983, pp. 192–205.

Greeley, R.: Geological Map of Mars, 1:15M Scale, Northeast Quadrant. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, p. 353.

Greeley, R.; Spudis, P. D.; and Guest, J. E.: Preliminary Geological Map of Ra Patera Quadrangle. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 347–348.

Head, J. W.; and Campbell, D. B.: Characteristics of Linear Mountainous Terrain in the Ishtar Terra Region, Venus. (Abstract.) Fall Amer. Geophys. Union meeting, 1982.

Head, J. W.; and Campbell, D. B.: Identification of Banded Terrain in the Mountains of Ishtar Terra, Venus. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982.

Head, J. W.; Campbell, D. B.; Peterfreund, A. R.; and Zisk, S.: Geology of Maxwell Montes, Venus. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 291–292.

Head, J. W.; Peterfreund, A. R.; Campbell, D. B.; and Zisk, S.: Characterization of the Banded Terrain in Akna and Freyja Montes, Venus. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 293–294.

Hiller, K.; and Pieri, D. C.: Geologic Mapping of Europa: Progress Report. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982.

Jourdain-Bodart, J.; and Rogeon, P.: Valles Marineris—Maja Vallis, étude géomorphologique. Mémoire DEA (M. S. report), Université de Nantes, 1981.

- Lucchitta, B. K.; and Soderblom, L. A.: The Geology of Europa. Satellites of Jupiter, David Morrison, ed., Univ. of Arizona Press, 1982, pp. 521–555.
- McCord, T. B.; Singer, R. B.; Hawke, B. R.; Adams, J. B.; Evans, D.; Head, J. W.; Mouginis-Mark, P. J.; Pieters, C. M.; Huguenin, R. L.; and Zisk, S. H.: Mars: Definition and Characterization of Global Surface Units With Emphasis on Composition. *J. Geophys. Res.*, vol. 87, B12, 1982, pp. 10129–10148.
- McGill, G. E.: Geology and Geophysics [of Venus]. *Nature*, vol. 296, 1982, pp. 14–15.
- McGill, G. E.: Geology and Tectonics of Venus. *Trans. Amer. Geophys. Union*, vol. 63, 1982, p. 1293.
- Melosh, J. H.; and McGill, G. E.: Mechanical Analysis of the Canyonlands Grabens. *Trans. Amer. Geophys. Union*, vol. 63, 1982, p. 583.
- Morris, E. C.: Geologic Map of Olympus Mons. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 134–136.
- Potter, D. B., Jr.; and McGill, G. E.: Field Analysis of a Pronounced Topographic Lineament, Canyonlands National Park, Utah. *Proc. 3d Int. Conf. Basement Tectonics*, 1981, pp. 169–176.
- Scott, D. H.: Stratigraphy and Age Relations in the Tharsis-Lunae Plenum Region of Mars. (Abstract.) *Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst.*, 1982, pp. 702–703.
- Scott, D. H.: Mars: Subdivision of Highland Rocks. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 304–306.
- Sharpton, V. L.; and Head, J. W.: Stratigraphy and Structural Evolution of Southern Mare Serenitatis: A Reinterpretation Based on Apollo Lunar Sounder Experiment (ALSE) Data. *J. Geophys. Res.*, vol. 87, B12, 1982, pp. 10983–10998.
- Shoemaker, E. M.; Lucchitta, B. K.; Plescia, J. B.; Squyres, S. W.; and Wilhelms, D. E.: Geology of Ganymede. The Satellites of Jupiter, D. Morrison, ed., Univ. of Arizona Press, 1982.
- Squyres, S. W.; Reynolds, R. T.; Cassen, P. M.; and Peale, S. J.: Geological Studies of Icy Satellites: Europa and Enceladus. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 22–23.
- Wells, S. G.; Bullard, T. F.; Condit, C. D.; Jercinovic, M.; Lozinsky, R. P.; and Rose, D. E.: Geomorphic Processes on the Alluvial Valley Floor of the Rio Puerco. Albuquerque Country II, J. A. Grambling and S. G. Wells, eds., *N. Mex. Geol. Soc. (Socorro)*, 1982, pp. 45–47.
- Whitford-Stark, J. L.: The Mountains of Io. *Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst.*, 1982, pp. 859–860.
- Williams, R. S., Jr.: Geomorphology of Relief Features. Ch. 31 of *Manual of Remote Sensing*, 2d ed., Amer. Soc. Photogram. (Falls Church, VA), 1983.
- Wise, D. U.: Linesmanship: Guidelines to a Thriving Geologic Art Form. *Geol. Soc. Amer. Bull.*, vol. 93, 1982, pp. 886–888.
- Wise, D. U.; and McCrory, T. A.: A New Method of Fracture Analysis: Azimuth-Versus-Traverse-Distance Plots. *Geol. Soc. Amer. Bull.*, vol. 93, 1982, pp. 889–897.
- Witbeck, N. E.; and Underwood, James R., Jr.: Geologic Mapping of the Lowland Plains: Mare Acidalium Quadrangle (MC-4), Mars. *Geol. Soc. Amer. Abstr. Programs*, vol. 14, no. 3, 1982, pp. 140–141.
- Zimbelman, J. R.; and Greeley, R.: Surface Properties of Ancient Cratered Terrain in the Northern Hemisphere of Mars. *J. Geophys. Res.*, vol. 87, 1982, pp. 10,181–10,189.

Structure, Tectonics, and Planetary and Satellite Evolutions

Arvidson, R. E.; and Guinness, E. A.: Clues to Tectonic Styles in the Global Topography of Earth, Venus, and Mars. *J. Geol. Ed.*, vol. 30, 1982, pp. 86–92.

Banerdt, W. B.; Phillips, R. J.; Sleep, N. H.; and Saunders, R. S.: Thick-Shell Tectonics on One-Plate Planets: Applications to Mars. *J. Geophys. Res.*, vol. 87, 1982, pp. 10,215–10,225.

Carr, M. H.: Geologic Evolution of Mars. European Space Agency SP-185, 1982, pp. 11–13.

Chicarro-Fernandez, A.; and Masson, Ph.: Ridges Related to Impact Craters and Basins on Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 282–284.

Chicarro-Fernandez, A.; Schultz, P. H.: Basin Control of Ridge Patterns on Mars. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983.

Comer, R. P.: Thick Plate Flexure. *Geophys. J. Roy. Astron. Soc.*, vol. 72, 1983, pp. 101–114.

Fernandez-Chicarro, A.: Cartographie automatique de structures compressives sur Mars. (Abstract.) Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG, Paris, 1982, pp. 176–178.

Grimm, R. E.; and Squyres, S. W.: Spectral Analysis of Topography on Ganymede. Reports of Planetary Programs, 1982, NASA TM-85127, 1983, pp. 24–25.

Hall, J. L.; Solomon, S. C.; Head, J. W.; and Mouginis-Mark, P. J.: Elysium Region, Mars: Characterization of Tectonic Features. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 275–276.

Head, J. W.; and Solomon, S. C.: Tectonic Evolution of the Terrestrial Planets. (Abstract.) 9th Annual Meeting, Eur. Geophys. Soc. and 18th Gen. Assem. Eur. Seismol. Com., Univ. of Leeds, U.K., 13A.05, 1982, p. 94. (Also in *Eos*, vol. 63, no. 51, p. 1293.)

Ivins, E. R.; Lyzenga, G. A.; Raefsky, A.; and Saunders, R. S.: Effective Anisotropy in the Deformation of Extensively Faulted Crustal Blocks. *Eos*, vol. 63, 1982, p. 119.

Kirk, R. L.; and Stevenson, D. J.: Thermal Evolution of a Differentiated Ganymede and Implications for Surface Features. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 373–374.

Lissauer, J. J.; Peale, S. J.; Cuzzi, J. N.; and Squyres, S. W.: Torque on the Co-Orbital Satellites Due to Saturn's Rings and the Melting of the Enceladus. (Abstract.) *Eos*, vol. 63, 1982, p. 1022.

Masson, Ph.: The Geologic Evolution of the Planet Mars. Formation of Planetary Systems, A. Brahic, ed., Centre National d'Études Spatiales, 1982, pp. 797–816.

Masson, Ph.: Relations Tectonique—Morphologie dans la région de Syria Planum (Mars). (Abstract.) Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG, Paris, 1982, pp. 185–187.

Masson, Ph.; and Fernandez-Chicarro, A.: Mars' Tectonics. Eur. Geol. Soc. Meeting (Leeds, U.K.), 1982.

Masson, Ph.; and Fernandez-Chicarro, A.: Mars' Tectonics. The Planet Mars, ESA SP-185, 1982, pp. 15–18.

Masursky, Harold: Internal Crustal Modification of the Satellites of Saturn and Jupiter and Implications for Venus. (Abstract.) 24th COSPAR Plenary (Ottawa, Canada), May 17–June 3, 1982.

- Maxwell, T. A.: Orientation and Origin of Ridges in the Lunae Palus-Coprates Region of Mars. *Lunar Planet. Sci. Conf. 13, J. Geophys. Res.*, vol. 87, Suppl., 1982, pp. A97-A108.
- Maxwell, T. A.: Orientations of Structural Features in the Lunae Palus-Coprates Region of Mars: Influence of Pre-existing Structure. *Lunar Planet. Sci. Conf. 13, Lunar and Planet. Inst.*, 1982, pp. 477-478.
- Maxwell, T. A.: Plains Ridges: Indicators of Compressional Stress on the Moon, Mars and Mercury. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 277-278.
- Parmentier, E. M.; Squyres, S. W.; Head, J. W.; and Allison, M. L.: The Tectonics of Ganymede. *Nature*, vol. 295, 1982, pp. 290-293.
- Plescia, J. B.; and Saunders, R. S.: Tectonic History of the Tharsis Region, Mars. *J. Geophys. Res.*, vol. 87, 1982, pp. 9775-9791.
- Poirier, J. P.; Sotin, C.; Peyronneau, J.; and Masson, Ph.: Ganymede—viscosité de l'intérieur et aspects de la surface. (Abstract.) *Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG, Paris*, 1982, pp. 191-192.
- Schaber, G. G.: Venus: Limited Extension and Volcanism Along Zones of Lithospheric Weakness. *Geophys. Res. Lett.*, vol. 9, no. 5, 1982, pp. 499-502.
- Schaber, G. G.; Davis, P. A.; Kozak, R. C.; and Eliason, E.: The Tectonics and Surface Roughness of Venus: A Progress Report. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 75-76.
- Schultz, R. A.; and Malin, M. C.: Martian Global Tectonics. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, p. 291.
- Sharpton, V. L.; and Head, J. W.: Tectonic Origin of Mare Ridges: Evidence From Basalt Stratigraphy in Mare Imbrium. (Abstract.) *Lunar Planet. Sci. Conf. 14*, 1983, pp. 690-691.
- Solomon, S. C.: The Internal Evolution of Venus and the Galilean Satellites. *Nature*, vol. 298, 1982, pp. 15-16.
- Solomon, S. C.; and Head, J. W.: Early Crustal Genesis: Physical and Tectonic Evolution. (Abstract.) *Eos*, vol. 63, no. 18, 1982, p. 366.
- Solomon, S. C.; and Head, J. W.: Evolution of the Tharsis Province of Mars: The Importance of Heterogeneous Lithospheric Thickness and Volcanic Construction. *J. Geophys. Res.*, vol. 87, no. B12, Nov. 30, 1982, pp. 9755-9774.
- Solomon, S. C.; and Head, J. W.: Is There Plate Recycling on Venus?: A Test of the Hypothesis Using Topographic and Radar Backscatter Data. (Abstract.) *Eos Trans. Amer. Geophys. Union*, vol. 63, 1982, p. 1092.
- Solomon, S. C.; and Head, J. W.: Mechanisms for Lithospheric Heat Transport on Venus: Implications for Tectonic Style and Volcanism. *J. Geophys. Res.*, vol. 87, no. B11, 1982, pp. 9236-9246.
- Solomon, S. C.; and Head, J. W.: Mechanisms for Lithospheric Heat Transfer on Venus: Predictions for Surface Volcanic and Tectonic Features. (Abstract.) *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 90-92.
- Solomon, S. C.; and Head, J. W.: Venus Banded Terrain: Evaluation of Tectonic Models for the Origin of Banding. (Abstract.) *Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst.*, 1983, pp. 723-724.
- Solomon, S. C.; Sjogren, W. L.; and Bratt, S. R.: The Structure of Isidis Basin, Mars, From Gravity Anomalies. (Abstract.) *Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst.*, 1983, pp. 725-726.
- Squyres, S. W.: The Evolution of Tectonic Features on Ganymede. *Icarus*, vol. 52, 1983, pp. 545-559.
- Squyres, S. W.; Reynolds, R. T.; Cassen, P. M.; and Peale, S. J.: Liquid Water and Active Resurfacing on Europa. (Abstract.) *Bull. Amer. Astron. Soc.*, vol. 7, 1982, p. 739.
- Squyres, S. W.; Reynolds, R. T.; Cassen, P. M.; and Peale, S. J.: The Tectonics of Enceladus. (Abstract.) *Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst.*, 1982, pp. 762-763.
- Squyres, S. W.; Reynolds, R. T.; Cassen, P. M.; and Peale, S. J.: The Evolution of Enceladus. *Icarus*, vol. 53, 1983, pp. 319-331.

Squyres, S. W.; Reynolds, R. T.; Cassen, P. M.; and Peale, S. J.: Liquid Water and Active Resurfacing on Europa. *Nature*, vol. 301, 1983, pp. 255–256.

Stephens, S. K.; Solomon, S. C.; and Head, J. W.: On the Age of Venus Highland Topography: Constraints From the Viscous Relaxation of Relief. (Abstract.) *Lunar Planet. Sci. Conf. 14*, Lunar Planet. Inst., 1983, pp. 747–748.

Thomas, P. G.; and Masson, Ph.: Géologie comparée de Mercure et de la Lune. (Abstract.) *Nouveaux développements dans la connaissance du Système Solaire*, Journées ATP de Planétologie INAG, Paris, 1982, pp. 162–164.

Thomas, P. G.; and Masson, Ph.: Tectonic Evolution of Mercury—Comparison With the Moon. *Ann. Geophysicae*, vol. 1, no. 1, sec. 1, 1983, pp. 53–58.

Touzeau, J. F.: Noctis Labyrinthus—essai d'interprétation de la géologie d'un secteur de la planète Mars. *Mémoire Maîtrise*. B. S. report, Université de Nantes, 1982.

Watters, T. R.; and Maxwell, T. A.: Strain Estimates for the Ridged Plains of Mars: Evidence of Compression in the Coprates Quadrangle. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 279–280.

Wise, D. U.: Faulting and Fracturing of Planetary Surfaces. *Proc. NATO Adv. Stud. Inst.*, Vulcano, Italy, 1982.

Wise, D. U.: New Fault and Fracture Domains of Southwestern New England; Hints on Localization of the Mesozoic Basins. *Geotechnology in Massachusetts*, O. C. Farquhar, ed., Univ. of Massachusetts, Graduate School Publication, 1982, pp. 447–454.

Impact Craters: Occurrence, Modeling, and Geologic Studies

- Allen, C. C.; Gooding, J. L.; and Keil, K.: Hydrothermally Altered Impact Melt Rock and Breccia: Contributions to the Soil of Mars. *J. Geophys. Res.*, vol. 87, no. B12, 1982, pp. 10,083–10,101.
- Bell, J. F.; and Hawke, B. R.: Recent Comet Impacts on the Moon? *Lunar Planet. Sci. Conf. 14*, *Lunar Planet. Inst.*, 1983, pp. 29–30.
- Clow, G. D.; and Pike, R. J.: Statistical Test of the $\sqrt{2}$ Spacing Rule for Basin Rings. *Lunar Planet. Sci. Conf. 13*, *Lunar Planet. Inst.*, 1982, pp. 123–124.
- Elston, W. E.: Impact and Volcanism Revisited, With Emphasis on Venus. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 93–94.
- Fink, J. H.; Greeley, R.; and Gault, D. E.: The Effect of Crustal Viscosity on Impact Cratering of Icy Satellites. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 101–102.
- Fleitout, L.; and Thomas, P. G.: Farfield Tectonics Associated With a Large Impact Basin—Application to Caloris on Mercury and Imbrium on the Moon. *Earth Planet. Sci. Lett.*, vol. 58, 1982, pp. 104–115.
- Fleitout, L.; and Thomas, P. G.: Tectonique associée avec un grand impact sur Mercure et sur la Lune. (Abstract.) *Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG*, Paris, 1982, pp. 165–166.
- Greeley, R.; Fink, J. H.; and Gault, D. E.: Experimental Insights Into the Lack of Impact Craters on Europa. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 20–21.
- Greeley, R.; Fink, J. H.; Gault, D. E.; and Guest, J. E.: Experimental Simulation of Impact Cratering on Icy Satellites. *Satellites of Jupiter*, Univ. of Arizona Press, 1982, pp. 340–378.
- Grieve, R. A. F.; and Head, J. W.: The Manicouagan Impact Structure: An Analysis of Its Original Dimensions and Form. *J. Geophys. Res.*, vol. 88, Suppl., 1982, pp. A807–A818.
- Hale, W.; and Grieve, R. A. F.: Volumetric Analysis of Complex Lunar Craters: Implications for Basin Ring Formation. *Lunar Planet. Sci. Conf. 13*, *J. Geophys. Res.*, vol. 87, Suppl., 1982, pp. A65–A76.
- Hartmann, Wm. K.: Energy Partitioning in Impacts Into Regolith-Like Powders. (Abstract.) *Lunar Planet. Sci. Conf. 14*, *Lunar Planet. Inst.*, 1983.
- Horner, Vicki; and Greeley, Ronald: Pedestal Craters on Ganymede, *Icarus*, vol. 51, 1982, pp. 549–562.
- Horner, Vicki; and Greeley, Ronald: Pedestal Craters on Ganymede: Interior Morphology. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 27–28.
- Malin, M. C.: Mudrains on Mars—What Causes Ejecta to Flow? *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 103–104.
- Pike, R. J.: Crater Peaks to Basin Rings: The Transition on Mercury and Other Bodies. (Abstract.) *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 117–119.
- Pike, R. J.: Morphologic Transitions for Craters and Basins on 13 Solar System Bodies. *Lunar Planet. Sci. Conf. 13*, *Lunar Planet. Inst.*, 1982, pp. 627–628.

- Pike, R. J.: Large craters or Small Basins on the Moon. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 610-611.
- Pike, R. J.; and Clow, G. D.: Geomorphology of Craters on Mercury: First Results From a New Sample. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 120-122.
- Plescia, J. B.; and Boyce, J. M.: Absolute Ages and Flux History for the Saturnian Satellites. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 35-40.
- Plescia, J. B.; and Boyce, J. M.: Crater Densities and Geologic Histories of Saturn's Icy Satellites: Rhea, Dione, Mimas, and Tethys. *Nature*, vol. 295, 1982, pp. 285-290.
- Plescia, J. B.; and Boyce, J. M.: Crater Densities of the Saturnian Satellites: Enceladus, Iapetus and Tethys. Reports of Planetary Geology Program, 1981, NASA TM-84211, 1982, pp. 7-9.
- Plescia, J. B.; and Boyce, J. M.: Crater Densities of the Saturnian Satellites: Rhea, Dione and Minas. Reports of Planetary Geology Program, 1981, NASA TM 84211, 1982, pp. 5-6.
- Plescia, J. B.; and Boyce, J. M.: Saturnian Satellite Crater Densities. (Abstract.) Saturn Meeting (Tucson, AZ), May 1982.
- Plescia, J. B.; and Boyce, J. M.: Crater Numbers and Geologic Histories of Iapetus, Enceladus, Tethys, and Hyperion. *Nature*, vol. 301, 1983, pp. 666-670.
- Roddy, D. J.; Davis, P. A.; and Soderblom, L. A.: Mega-Impact Cratering on the Earth. (Abstract.) *Geol. Soc. Amer. Abstr.*, 95th Annual Meeting, 1982, p. 601.
- Ruzick, A.; and Strom, R. G.: Spatial Distribution of Craters on the Moon and Callisto. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, p. 105.
- Sheridan, M. F.: The Energy Line: A Heuristic Model for Martian Rampart Ejecta Sheets. NASA TM-84211, 1982, pp. 87-88.
- Solomon, S. C.; Comer, R.; and Head, J. W.: The Evolution of Impact Basins: Viscous Relaxation of Topographic Relief. *J. Geophys. Res.*, vol. 87, no. B5, 1982, pp. 3975-3992.
- Solomon, S. C.; Stephens, S. K.; and Head, J. W.: On Venus Impact Basins: Viscous Relaxation of Topographic Relief. *J. Geophys. Res.*, vol. 87, 1983, pp. 7763-7771.
- Spudis, P. D.: The Excavation of Lunar Multi-Ring Basins. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 114-116.
- Spudis, P. D.: The Geology of Lunar Multi-Ring Basins. Ph.D. Dissertation, Arizona State Univ. (Tempe), 1982.
- Spudis, P. D.: Orientale Basin Ejecta: Depths of Derivation and Implications for the Basin-Forming Process. Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 760-761.
- Squyres, S. W.; and Sagan, C.: Ballistic Diffusion on Planetary Satellites. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 739-740.
- Strom, R. G.; and Casacchia, R.: The Cratering Record of Galileo Regio, Ganymede. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, p. 755.
- Strom, R. G.; Woronow, A.; and Spencer, J.: Effects of Lunar Orientale Impact on Pre-Existing Crater Population. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, p. 108.
- Tanaka, K. L.: A New Time-Saving Crater-Count Technique, With Application to Narrow Features. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 123-125.
- Thomas, P. G.; and Masson, Ph.: Comparative Geology of Orientale, Caloris, and Argyre Basins. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 285-287.
- Thomas, P. G.; and Masson, Ph.: Comparative Structure of the Large Impact Basin on Mars and the Moon (Abstract.) 2d EUG Meeting. (Strasbourg), 1983.

- Walker, A. S.; and El-Baz, F.: Analysis of Crater Distributions in Mare Units on the Lunar Far Side. *The Moon and the Planets*, vol. 27, 1982, pp. 91–106.
- Whitford-Stark, J. L.: Frigoris Revisited. *Lunar Planet. Sci. Conf. 14*, Lunar Planet. Inst., 1983, pp. 843–844.
- Whitford-Stark, J. L.; and Hawke, B. R.: Geologic Studies of the Lunar Far Side Crater Tsiolkovsky. *Lunar Planet. Sci. Conf. 13*, Lunar Planet. Inst., 1982, pp. 861–862.
- Wilhelms, D. E.: Procellarum, a Giant Planetary Basin. (Abstract.) *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 111–113.
- Wilhelms, D. E.: Effects of the Procellarum Basin on Lunar Geology, Petrology, and Tectonism. (Abstract.) *Lunar Planet. Sci. Conf. 14*, Lunar Planet. Inst., 1983, pp. 845–846.
- Woronow, A.; Strom, R. G.; and Gurnis, M.: Interpreting the Cratering Record: Mercury to Ganymede and Callisto. Ch. 9 of *Satellites of Jupiter*, Morrison, ed., Univ. of Arizona Press, 1982, p. 237.

Volcanism

- Baloga, S. M.; Matson, D. L.; and Pieri, D. C.: The Auras of Sulfur Flows on Io. (Abstract.) Bull. Amer. Astron. Soc., vol. 14, 1982, pp. 735.
- Baloga, S. M.; Matson, D. L.; and Pieri, D. C.: Auras and Regolith Outgassing by Sulfur Flows on Io. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983.
- Baloga, S. M.; Pieri, D. C.; and Matson, D. L.: Regolith Outgassing by Sulfur Flows on Io. Reports of Planetary Programs, 1982, NASA TM-85127, 1982.
- Carr, M. H.: Volcanism in the Solar System. Planet. Rep., vol. II, no. 3, 1982, pp. 3-5.
- Condit, C. D.: Field, Petrologic, and Petrochemical Data for the Western Springerville-Show Low Volcanic Field, Arizona. (Abstract.) Geol. Soc. Amer. Abstr. Programs, 1983, vol. 15.
- Criswell, C. W.; and Elston, W.: Criteria for identifying Pyroclastic Flows on High- and Low-Resolution Images: The Mount St. Helens Pumice Plain. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 143-145.
- Crumpler, L. S.: Volcanism in the Mount Taylor Region. New Mexico Geological Society Guidebook of Albuquerque Country II, 33d Field Conf., 1982, pp. 291-298.
- Crumpler, L. S.; Aubele, J. C.; and Elston, W. E.: Basalt Flow Vertical Structure and Vesicle Zonation. (Abstract.) Geol. Soc. Amer. Abstr. Programs, vol. 15, 1983.
- Crumpler, L. S.; and Strom, R. G.: Active Volcanism on Io: A Unified Model and Mechanism. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, p. 409.
- De Hon, R. A.: Martian Volcanic Materials: Preliminary Estimates in the Eastern Tharsis Region. J. Geophys. Res., vol. 87, no. B12, 1982, pp. 9821-9828.
- De Hon, R. A.: Thickness and Distribution of Volcanic Materials on Mars: A Progress Report. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 129-130.
- De Rita, D.; Sheridan, M. F.; and Marshall, J. R.: SEM Surface Textural Analysis of Phenocrysts From Pyroclastic Deposits at Baccano and Sacrofano Volcanoes, Latium, Italy. SEM in Geology, W. B. Whalley and D. H. Krinsley, eds., Geoabstracts (Norwich, England), 1982.
- Dzurisin, D.; and Casadevall, T. J.: Morphologic evolution of the May 18, 1980 Crater at Mount St. Helens, Washington. (Abstract.) Reports of Planetary Geology Program, 1981, NASA TM-84211, 1982, pp. 172-173.
- Economou, Harris: Lava Channels on the Eastern Snake River Plain, Idaho. Geol. Soc. Amer. Abstr., 1982, p. 52.
- Francis, P.; and Wood, C. A.: Absence of Silicic Volcanism on Mars: Implications for Crustal Composition and Volatiles Abundance. J. Geophys. Res., vol. 87, 1982, pp. 9881-9889.
- Frey, H.; and Jarosewich, M.: Subkilometer Martian Volcanoes: Properties and Possible Terrestrial Analogs. J. Geophys. Res., vol. 87, 1982, pp. 9867-9869.
- Frey, H.; Semeniuk, A. M.; and Jarosewich, M.: Small Cones in Cydonia: Distributions and Properties Related to Background Terrain. Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 215-216.
- Garvin, J. B.: Vesiculation in Submarine Basalts. (Abstract.) Eos, vol. 63, no. 18, 1982, p. 473.

- Garvin, J. B.; Head, J. W.; and Wilson, L.: Magma Vesiculation and Pyroclastic Volcanism on Venus. *Icarus*, vol. 52, 1982, pp. 365–372.
- Greeley, R.: The Snake River Plain, Idaho: Representative of a New Category of Volcanism. *J. Geophys. Res.*, vol. 87, 1982, pp. 2705–2712.
- Hawke, B. R.; and Whitford-Stark, J. L.: The Chenier Crater Flows: Evidence for an Origin as Tsiolkovsky Impact Melt. *Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst.*, 1982, pp. 310–311.
- Hawke, B. R.; and Whitford-Stark, J.: The Origin of the Chenier Crater Flows. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 152–153.
- Head, J. W.; Wilson, L.; and Garvin, J. B.: Volcanic Eruptive Processes on Venus: Some Theoretical Expectations. (Abstract.) 9th Annual Meeting, *Geophys. Soc. 18th Gen. Assem. Eur. Seismol. Com.*, Univ. Leeds, U.K., 1982, p. 94. (Also in *Eos*, vol. 63, no. 51, p. 1293.)
- Malin, M. C.; and Dzurisin, D., eds.: *Mount St. Helens: The First Two Years—A Guide to the 1980–81 Eruptions and Their Planetary Implications*. 1982.
- Malin, M. C.; and Sheridan, M. F.: Computer-Assisted Mapping of Pyroclastic Surges. *Science*, vol. 217, 1982, pp. 637–639.
- Malin, M. C.; and Sheridan, M. F.: Computer-Assisted Models for Surge Eruptions. *Workshop on Explosive Volcanism (Rome)*, 1982.
- Moore, H. J.: Mapping Volcanic Features on Mars. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 132–133.
- Morris, E. C.: The Aureole Deposits of the Martian Volcano Olympus Mons. *J. Geophys. Res.*, vol. 87, no. B2, 1982, pp. 1164–1178.
- Morris, E. C.: The Enigmatic Aureole Deposits of the Martian Volcano Olympus Mons. *Geol. Soc. Amer., Abstr. Programs*, vol. 14, no. 7, 1982, p. 571.
- Mouginis-Mark, P. J.; Wilson, L.; and Head, J. W.: Explosive Volcanism on Hecates Tholus, Mars: Investigation of Eruption Conditions. *J. Geophys. Res.*, vol. 87, no. B12, Nov. 31, 1982, pp. 9980–9904.
- Pieri, D. C.; and Baloga, S. M.: Colors of Lava Flows on Io. (Abstract.) *Bull. Amer. Astron. Soc.*, vol. 14, 1982, p. 734.
- Pieri, D. C.; Baloga, S. M.; and Nelson, R. M.: Colors of Lava Flows at Ra Patera, Io. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982, p. 16.
- Pilcher, C. B.: The Ejection of Material From Io. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1982.
- Roth, L. E.; and Saunders, R. S.: Rheology of the Arsia Mons Lava Flows. *Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst.*, 1983, pp. 652–653.
- Scott, D. H.: Volcanos and Volcanic Provinces: Martian Western Hemisphere. *J. Geophys. Res.*, vol. 87, no. B12, 1982, pp. 9839–9851.
- Scott, D. H.; and Tanaka, K. L.: Ignimbrites of Amazonis Planitia Region of Mars. *J. Geophys. Res.*, vol. 87, no. B2, 1982, pp. 1179–1190.
- Sheridan, M. F.; and Malin, M. C.: Application of Computer-Assisted Mapping to Volcanic Hazard Assessment at Volcano and Lipari, Aeolian Islands. *Trans. Amer. Geophys. Union, Eos*, vol. 63, 1982.
- Sheridan, M. F.; and Malin, M. C.: Computer-Assisted Maps for Explosive Eruptions: Long Valley Caldera, California. 18th Gen. Assem., *Int. Union Geod. Geophys. (Hamburg, German)*, 1983.
- Sheridan, M. F.; and Wohletz, K. H.: Implications of Large-Scale, Explosive Melt-Water Interactions: Particle Characteristics and Dispersal Patterns. *Reports of Planetary Programs*, 1982, NASA TM–85127, 1983, pp. 158–159.

- Stevenson, D. J.: Volcanism and Igneous Processes in Small Icy Satellites. *Nature*, vol. 298, 1982, pp. 142–144.
- Strom, R. G.; and Schneider, N. M.: Volcanic Eruption Plumes on Io. Ch. 16 of *Satellites of Jupiter*, Morrison, ed., Univ. of Arizona Press, 1982, p. 598.
- Thomas, P. G.; Masson, Ph.; and Fleitout, L.: Global Volcanism and Tectonism on Mercury—Comparison With the Moon. *Earth Planet. Sci. Lett.*, vol. 58, 1982, pp. 95–103.
- Whitford-Stark, J. L.: Factors Influencing the Morphology of Volcanic Landforms: An Earth-Moon Comparison. *Earth Sci. Rev.*, vol. 18, 1982, pp. 109–168.
- Whitford-Stark, J. L.: Gravitational Effects on Caldera Formation. *Lunar Planet. Sci. Conf. 13*, Lunar Planet. Inst., 1982, pp. 857–858.
- Whitford-Stark, J. L.: A Preliminary Analysis of Lunar Extra-Mare Basalts: Distribution, Compositions, Ages, Volumes, and Eruption Styles. *The Moon and Planets*, vol. 26, 1982, pp. 323–338.
- Whitford-Stark, J. L.: Tharsis Volcanoes: Separation Distances, Relative Ages, Sizes, Morphologies, and Depths of Burial. *J. Geophys. Res.*, vol. 87, 1982, pp. 9828–9838.
- Whitford-Stark, J. L.: Tharsis Volcanoes: Separation Distances, Relative Ages, Sizes, Morphologies and Depths of Burial. *Eos*, vol. 63, 1982, p. 535.
- Whitford-Stark, J. L.: Venus, Asian Volcanotectonics, and Landsat and Shuttle Imagery. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 95–98.
- Williams, R. S., Jr.; and Moore, J. G.: Man Against Volcano: The Eruption on Heimaey, Vestmann Islands, Iceland. *U.S. Geol. Surv. Sci. Leaflet*, rev. 2d ed., 1983.
- Williams, R. S., Jr.; Thorarinsson, Sigurdur; and Morris, E. C.: Geomorphic Classification of Icelandic Volcanoes. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 155–159.
- Williams, R. S., Jr.; Thorarinsson, Sigurdur; and Morris, E. C.: Geomorphic Classification of Icelandic Volcanoes. *Jökull*, vol. 31/33, 1983.
- Witbeck, N. E., and Underwood, J. R.: Lava Flow Material on the Mottled Plains in Mare Acidaliu Quad-range (MC-4), Mars. *Reports of Planetary Programs*, 1982, NASA TM-85127, pp. 137–139.
- Wohletz, K. H.; and Krinsley, D. H.: Scanning Electron Microscopic Analyses of Basaltic Hydromagmatic Ash. *Scanning Electron Microscopy in Geology*, B. Whorley and D. H. Krinsley, eds., Geological Abstracts, Inc. (Norwich, England), 1982.
- Wohletz, K. H.; and McQueen, R. G.: Experimental Hydromagmatic Volcanism. *Amer. Geophys. Union Trans.*, *Eos*, vol. 62, no. 45, 1981, p. 1085.
- Wohletz, K. H.; and McQueen, R. G.: Experimental Hydromagmatic Volcanism. *Explosive Volcanism: Inception, Evolution, and Hazards*, F. R. Boyd, ed., *Studies in Geophysics*, National Academy of Sciences, 1983.
- Wohletz, K. H.; and Sheridan, M. F.: Melt-Water Interactions: Series II Experimental Design. *Reports of Planetary Geology Program*, 1981, NASA TM-84211, 1982, pp. 169–171.
- Wood, C. A.: On the Geometric Form of Volcanoes—Comment. *Earth Planet. Sci. Lett.*, vol. 57, 1982, pp. 451–452.
- Wood, C. A.: Satellite Mapping of Galapagos Volcanoes. (Abstract.) *Eos*, vol. 63, 1982, p. 1138.
- Wood, C. A.; and Schuver, H.: What Controls a Volcano's Form? (Abstract.) *Reports of Planetary Geology Program*, 1981, NASA TM 84211, 1982, pp. 541–543.
- Wood, C. A.; and Whitford-Stark, J. L.: Eruption Forecast for Krafla Caldera. *Eos*, vol. 63, 1982, p. 505.

Fluvial, Mass Wasting, Glacial, and Periglacial Studies

Baker, V. R.; and Brakenridge, G. R.: Formation of Valley Networks on Mars. *Geol. Soc. Amer. Abstr. Programs*, vol. 15, no. 7, 1982, p. 438.

Baker, V. R.; Brakenridge, G. R.; and Kochel, R. C.: Valley Networks on Mars: Mapping and Analog Studies. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1983, pp. 206-208.

Baskerville, C. A.: Collapse: A Mechanism for Martian Scarp Retreat. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 244-252.

Boothroyd, J. C.: Ancient Fluvial Drainage Systems: Margaritifer Sinus Area, Mars. (Expanded Abstract.) *Reports of Planetary Programs*, 1982, NASA TM-85127, pp. 209-212.

Clegg, R. H.; and Frey, H.: Morphometric Analysis and Martian Tributary Networks. *Lunar Planet. Sci. Conf. 14*, *Lunar Planet. Inst.*, 1983, pp. 126-127.

Clifford, S. M.: Polar Basal Melting on Mars. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 261-263.

Clifford, S. M.: Ground Ice in the Equatorial Region of Mars: A Fossil Remnant of an Ancient Climate or a Replenished Steady-State Inventory? *Int. Conf. Permafrost (Fairbanks)*, July 1983.

Clifford, S. M.; and Hillel, D.: The Stability of Ground Ice in the Equatorial Region of Mars. *J. Geophys. Res.*, vol. 88, 1983, pp. 2456-2474.

Clifford, S. M.; Hillel, D.; Huguenin, R. L.; and Johansen, L. A.: Has Ground Ice Been Replenished in the Equatorial Region of Mars? *Trans. Amer. Geophys. Union*, vol. 63, 1982, p. 365.

Eppler, D. B.; and Malin, M. C.: Modification of Martian Fretted Terrain. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 237-238.

Gibson, E. K., Jr.; Hokanson, S. A.; Wentworth, S. J.; and Bustin, R.: Behavior of Water-Soluble Cations and Anions in Cold Desert Environments. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1983, pp. 333-335.

Gibson, E. K., Jr.; Hokanson, S. A.; Wentworth, S. J.; and Bustin, R.: Water-Soluble Ion Behavior in Cold Desert Environments. *Lunar Planet. Sci. Conf. 14*, *Lunar Planet. Inst.*, 1983, pp. 245-246.

Gustavson, T. C.; and Boothroyd, J. C.: Subglacial Fluvial Erosion: A Major Source of Stratified Drift, Malaspina Glaciers, AK. *Research in Glacial, Glaciofluvial and Glaciolacustrine Systems*. Davidson-Arnott, Nickling, and Fahey, eds., *Proc. 6th Guelph Symp. Geomorphology*, 1980, pp. 93-116.

Kochel, R. C.; Baker, V. R.; Simmons, D. W.; and Lis, C. J.: Surface Channel Networks Developed by Groundwater Sapping in a Laboratory Model: Analogy to Sapping Channels on Mars. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, pp. 288-290.

Kochel, R. C.; and Caper, A. P.: Structural Control of Sapping Valley Networks Along Valles Marineris, Mars. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1983, pp. 295-297.

Kochel, R. C.; Runyon, C. J.; and Baker, V. R.: Geomorphic Mapping of Mangala Vallis, Mars. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1983, pp. 230-232.

- Komar, P. D.: Flume Experiments on the Formation of Streamlined Islands. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 222-224.
- Komar, P. D.: The Mars Channel Workshop: A report. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 394-396.
- Komar, P. D.: Spectral Analyses of Meandering Channels on Earth and Mars. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 219-221.
- Komar, P. D.: Streamlined Islands on Earth and Mars. 95th Annual Meeting, Geol. Soc. Amer. Abstr. Programs, 1982, p. 534.
- Lucchitta, B. K.: Cold-Climate Features on Mars. (Abstract.) XIth Cong., Int. Union Quat. Res. (Moscow), vol. 1, 1982, p. 202.
- Lucchitta, B. K.: Ground Ice and Debris Flows in the Fretted Terrain, Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982.
- Lucchitta, B. K.: Ice Sculpture in the Martian Outflow Channels. J. Geophys. Res., vol. 87, no. B12, 1982, pp. 9951-9973.
- Lucchitta, B. K.: Preferential Development of Chaotic Terrains on Sedimentary Deposits, Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 268-270.
- Lucchitta, B. K.: Ice-Lubricated Flow in Martian Fretted Channels and Implications for Outflow Channel Processes. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 446-447.
- Lucchitta, B. K.; and Ferguson, H. M.: Chryse Basin Channels: Low Gradients and Ponded Flow. J. Geophys. Res., vol. 88, Suppl. Lunar Planet. Sci. Conf. 13, pt. 2, Lunar Planet. Inst., 1982, pp. A553-A568.
- Lucchitta, B. K.; and Ferguson, H. M.: Martian Outflow Channels: Low Gradients and Ponded Flow. (Abstract.) Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 447-448.
- Malin, M. C.; and Eppler, D. B.: Martian Fretted Terrain. (Abstract.) Proc. 4th Int. Conf. Permafrost (Fairbanks), 1983.
- Moore, H. J.: Channel Deposits on Mars. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 213-215.
- Patton, P. C.: Quantitative Morphology of the Valles Marineris Scarps. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 242-243.
- Pieri, D. C.; and Parker, T.: Geologic Mapping of Martian Valley Systems, II: Aeolis Region, Reports of Planetary Programs, 1982, NASA TM-85127, 1982, p. 354.
- Scott, D. H.: Meander Relics: Evidence of Extensive Flooding on Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 216-218.
- Tanaka, K. L.: Landslides of Vermillion Cliffs, Arizona: Application to Mars. (Abstract.) Reports of Planetary Geology Programs, 1982, NASA TM-85127, 1982, pp. 253-255.
- Wood, C. A.: Pingo, Gervigigar and Martian Mysteries. (Abstract.) Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 875-876.

Eolian and Arid Climate Studies

Baker, V. R.: Depositional Landforms on Mars. (Abstract.) 11th Int. Congr. Sedimentol., McMaster University (Hamilton, Ontario), 1982, p. 22.

Breed, C. S.: Dune Forms in Space Images—A Morphometric approach to the Study of Desert Sand Seas. Summaries, 1st Thematic Conf. Remote Sensing Arid Semiarid Lands: Int. Conf. Remote Sensing Envir. (Cairo) Environ. Res. Inst. Michigan (Ann Arbor), Jan. 1982, pp. 8–9.

Clifford, S. M.: Eolian Sediments on Mars: Possible Sources and Sinks of Atmospheric H₂O. Bull. Amer. Astron. Soc., vol. 14, 1982, p. 758.

El-Baz, F.; and Maxwell, T. A. (eds.): Desert Landforms of Southwest Egypt: A Basis for Comparison With Mars. NASA CR-3611, 1982.

Garvin, J. B.: Characterizations of Rock Populations in the Western Desert of Egypt and Comparisons With Mars. Desert Landforms of Southwest Egypt: A Basis for Comparison With Mars, F. El-Baz and T. A. Maxwell, eds., NASA CR-3611, 1982, pp. 261–280.

Greeley, R.: Velocities of Windblown Particles in Saltation: Earth and Mars, 11th Int. Congr. Sedimentol., 1982, p. 63.

Greeley, R.: Wind Abrasion of Rocks: Computer Simulation. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 175–176.

Greeley, R.: Wind as a Geological Process: Earth, Mars, Venus, and Titan. 11th Int. Congr. Sedimentol., 1982, p. 63.

Greeley, R.; Leach, R. N.; Williams, S. H.; White, B. R.; Pollack, J. B.; Krinsley, D. H.; and Marshall, J. R.: Rate of Wind Abrasion on Mars. J. Geophys. Res., vol. 87, 1982, pp. 9–24.

Greeley, R.; Leach, R.; Williams, S. H.; White, B. R.; Pollack, J. B.; Krinsley, D. H.; and Marshall, J. R.: Rate of Wind Abrasion on Mars. J. Geophys. Res., vol. 87, 1982, pp. 10009–10029.

Greeley, R.; and Williams, S.: Rolling “Stones” on Venus: A Mode of Wind Transport. Geol. Soc. Amer. Abstr. Programs, 1982, p. 502.

Greeley, R.; and Williams, S.: Windblown Sand on Venus: Preliminary Laboratory Simulations. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 167–169.

Greeley, R.; Williams, S.; Iversen, J. D.; Leach, R.; White, B. R.; and Pollack, J.: Windblown Sand on Venus: Preliminary Laboratory Simulations, Eos, vol. 63, no. 45, 1982, p. 1021.

Greeley, R.; Williams, S. H.; and Marshall, J. R.: Velocities of Windblown Particles in Saltation: Preliminary Laboratory and Field Measurements. Proc. Int. Ass. Sedimentol., 1982 (Hamilton, Ontario), 1983.

Guinness, E. A.; and Arvidson, R. E.: Aeolian Soil Units on Mars—Viking Orbiter and Lander Observations. Eos, vol. 63, 1982, p. 365.

Iversen, J. D.; Greeley, R.; and Pollack, J. B.: Wind Tunnel Modeling of Bright and Dark Crater-Associated Streaks. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 185–187.

Krinsley, D. H.; Marshall, J.; McCauley, J. F.; Breed, C. S.; and Grolier, M. J.: Production of Fine Silt and Clay During Natural Eolian Abrasion. (Abstract.) NASA TM-84211, 1982, pp. 251–254.

- Lee, S. W.; Thomas, P. G.; and Veverka, J.: Wind Streaks in Tharsis and Elysium. *J. Geophys. Res.*, vol. 87, 1982, pp. 10025–10041.
- McCauley, J. F.; Grolier, M. J.; Breed, C. S.; MacKinnon, D. J.; and Billingsley, G. H.: Field Modeling of the Response of Various Desert Surfaces to the Long- and Short-Term Effects of the Wind—Mars Applications. NASA TM–84211, 1981, pp. 238–240.
- McCauley, J. F.; Breed, C. S.; MacKinnon, D. J.; and Grolier, M. J.: The U.S. Dust Storm of February 1977 Analyzed by Geostationary Orbit Environmental Satellite (GOES) in Conjunction With Aerial and Ground Observations. Summaries, 1st Thematic Conf. Remote Sensing Arid Semiarid Lands: Int. Conf. Remote Sensing Environ. (Cairo), Environ. Res. Inst. Michigan (Ann Arbor), Jan. 1982, p. 166.
- McCauley, J. F.; Grolier, M. J.; Breed, C. S.; MacKinnon, D. J.; Billingsley, G. H.; and Helm, P. J.: Monitoring Desert Winds by Remote Sensing—The U.S. Geological Survey Desert Winds Project. Poster Session, 1st Thematic Conf. Remote Sensing Arid Semiarid Lands: Int. Conf. Remote Sensing Environ. (Cairo), Environ. Res. Inst. Michigan (Ann Arbor), Jan. 1982. (Paper presented by M. J. Grolier.)
- Mainguet, M.; and Moreau, C.: Aspects of the Eolian Dynamic in the Northern Circumpolar Sandsea of Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 193–196.
- Mainguet, M.; and Moreau, C.: Dunes et transport de particules dans l'erg circumpolaire nord de la planète Mars. (Abstract.) Nouveaux développements dans la connaissance du Système Solaire, Journées ATP de Planétologie INAG, Paris, 1982, pp. 188–189.
- Marshall, J.; Leach, R.; Treat, C.; and Greeley, R.: Simulating Aeolian Processes on Venus With a High-Pressure N₂ Atmosphere. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 165–166.
- Moore, H. J.: Erosion of Surface Materials at the Mutch Memorial Station (Lander 1), Mars. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 180–181.
- Moreau, C.: La dynamique éolienne à la périphérie de la calotte polaire septentrionale de la planète Mars. Mémoire Maîtrise (B.Sc report), Université de Reims, 1982.
- Peterfreund, A. R.: Dust Storm Activity on Mars During the Viking Mission. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 177–179.
- Strickland, E. L.: Eolian Stratigraphy of the West Central Equatorial Region of Mars. Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 781–782.
- Thomas, P.: Mars Eolian Sedimentation: How Much, How Fast? Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 191–192.
- Thomas, P.: Present Wind Activity on Mars: Relation to Large Latitudinally Zoned Sediment Deposits. *J. Geophys. Res.*, vol. 87, 1982, pp. 9999–10,008.
- Underwood, James R., Jr.; and Kandil, Ahmed: Role of Wind and Water in Yardang Development, Southwest Egypt. *Geol. Soc. Amer. Abstr. Programs*, vol. 14, no. 3, 1982, p. 138.
- Walker, A. S.: Deserts of China. *Amer. Sci.*, vol. 70, 1982, pp. 366–376.
- Walker, A. S.; and Shu, Liu: Monitoring Arid Land Changes in the Turpan Depression. 1st Thematic Conf. Remote Sensing Arid Semiarid Lands: Int. Conf. Remote Sensing Environ. (Cairo), Environ. Res. Inst. Michigan (Ann Arbor), Jan. 1982, pp. 755–762.
- Wall, S. D.: Speculative Evidence for a Third Year Dust Storm on Mars. Paper Presented at AAS-DPS Annual Meeting, Oct. 1982.
- White, B. R.; and Greeley, R.: Particle Motion of Venusian Saltation. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 173–174.
- Williams, S. H.; and Greeley, R.: Flux of Windblown Particles on Venus: Preliminary Laboratory Results. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 170–172.

Regolith, Volatiles, Atmosphere, and Climate Studies

Booth, M. C.; Gibson, E. K., Jr.; and Kotra, R. K.: Chemical Weathering on Mars: Interactions of Sulfur Dioxide With Olivine and Olivine Tholeiite in Simulated Martian Environments. *Lunar Planet. Sci. Conf. 13*, 1982, pp. 55–56.

Carr, M. H.: Past Climate on Mars. (Abstract.) *Eos*, vol. 63, 1982, p. 1018.

Carr, M. H.: Periodic Climate Change on Mars: Review of Evidence and Effects on Distribution of Volatiles. *Icarus*, vol. 50, 1982, pp. 129–139.

Clifford, S. M.: Mechanisms for the Vertical Transport of H₂O in the Martian Regolith. *Proc. Conf. Planet. Volatiles (Alexandria, MN)*, *Lunar Planet. Inst. contribution 488*, 1982, pp. 23–24.

Clifford, S. M.; and Hillel, D.: Knudsen Diffusion: Gaseous Transport in Small Soil Pores. Paper submitted to *Soil Sci.*, 1983.

Cutts, J. A.; and Pollack, J. B.: Quasi-Period Climate Change in Mars and Earth. *Icarus*, vol. 50, 1982, pp. 127–128.

De Hon, R. A.: Development of Planetary Megaregoliths. *Lunar Planet. Sci. Conf. 13*, *Lunar Planet. Inst.*, 1982, pp. 146–147.

Donahue, T. M.; and Pollack, J. B.: Origin and Evolution of the Atmosphere of Venus. *Venus*, T. M. Donahue, D. M. Hunten, L. Colin, and A. Nagy, eds., Univ. of Arizona Press, 1983.

Fanale, F. P.; Banerdt, W. B.; Saunders, R. S.; Johansen, L. A.; and Salvail, J. P.: Seasonal Carbon Dioxide Exchange Between the Regolith and Atmosphere of Mars: Experimental and Theoretical Studies. *J. Geophys. Res.*, vol. 87, 1982, pp. 10, 215–10, 225.

Fanale, F. P.; and Jakosky, B.: Regolith-Atmosphere Exchange of Water and Carbon Dioxide on Mars: Effects on Atmospheric History and Climate Change. *Planet. Space Sci.*, vol. 30, 1982, pp. 819–831.

Fanale, F. P.; and Salvail, J. P.: Ice-Poor Regolith Development and Destruction on Small Icy-Dusty and Icy-Rocky Objects. *Proc. Conf. Planet. Volatiles (Alexandria, MN)*, *Lunar Planet. Inst. contribution 488*, 1982.

Fanale, F. P.; Salvail, J. P.; Banerdt, W. B.; and Saunders, R. S.: Mars: The Regolith-Atmosphere-Cap System and Climate Change. *Icarus*, vol. 50, 1982, pp. 381–408.

Gibson, E. K., Jr.: A Review of Distributions of Sulfur in Solar System Objects. *Proc. Conf. Planet. Volatiles (Alexandria, MN)*, 1982, pp. 41–42.

Gibson, E. K., Jr.; Bustin, R.; and Wentworth, S. J.: Development of Regoliths in Mars-Like Environments. *Lunar Planet. Sci. Conf. 13*, *Lunar Planet. Inst.*, 1982, pp. 259–260.

Gibson, E. K., Jr.; Wentworth, S. J.; and McKay, D. S.: Chemical Weathering and Diagenesis of a Cold Desert Soil From Wright Valley, Antarctica: An Analog of Martian Weathering Processes. *Lunar Planet. Sci. Conf. 13*, *J. Geophys. Res.*, vol. 88, 1983, suppl. A912–A928.

Gooding, J. L.: Alteration of Rocks in Hot CO₂ Atmospheres: Further Experimental Results and Application to Mars. (Abstract.) *Reports Planetary Programs*, 1982, NASA TM–85127, 1982, pp. 327–329.

Huguenin, R. L.: Chemical Weathering and the Viking Biology Experiments on Mars, *J. Geophys. Res.*, vol. 87, no. B12, 1982, pp. 10069–10082.

- Huguenin, R. L.; and Clifford, S. M.: Remote Sensing Evidence for Regolith Water Vapor Sources on Mars. *J. Geophys. Res.*, vol. 87, no. B12, 1982, pp. 10227-10251.
- Kotra, R. K.; Gibson, E. K., Jr.; and Urbancic, M. A.: Release of Volatiles From Martian Analog Materials. *Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst.*, 1982, pp. 405-406.
- Kotra, R. K.; Gibson, E. K., Jr.; and Urbancic, M. A.: Release of Volatiles From Possible Martian Analogs. *Icarus*, vol. 51, 1982, pp. 593-605.
- Kotra, R. K.; See, T. H.; Gibson, E. K., Jr.; Hörz, F.; Cintala, M. J.; and Schmidt, R. S.: Carbon Dioxide Loss in Experimentally Shocked Calcite and Limestone. *Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst.*, 1983, pp. 401-402.
- Lucchitta, B. K.; and Boothroyd, J. C.: Mars: Evidence for Climatic Change. *Geol. Soc. Amer. Abstr. Programs*, vol. 14, no. 7, 1982, p. 551.
- Pollack, J. B.; and Black, D. C.: Noble Gases in Planetary Atmospheres: Implications for the Origin and Evolution of Atmospheres. *Icarus*, vol. 51, 1982, pp. 169-198.
- Pollack, J. B.; and Toon, O. B.: Quasi-Periodic Climate Changes on Mars: A Review. *Icarus*, vol. 50, 1982, pp. 259-287.
- Spencer, J. R.: Evidence for Mobility of Water Ice on Callisto. *Reports of Planetary Programs*, 1982, NASA TM-85127, 1982, p. 29.
- Zisk, S. H.; and Mouginis-Mark, P. J.: Possible Detection of Liquid Water on Mars From Earth-Based Radar. Paper submitted to *Icarus*, 1982.

Radar

Breed, C. S.; McCauley, J. F.; Schaber, G. G.; Walker, A. S.; and Berlin, G. L.: Dunes on SIR-A Images. Shuttle Imaging Radar-A (SIR-A) Experiment, J. B. Cimino and C. Elachi, eds., JPL Pub. 82-77, 1982, pp. 4-52 to 4-86.

Clark, P. E.: A Look at the Major Terrains of Mercury Through Radar Profiles. Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, p. 119.

Elachi, C.; Brown, W. E.; Cimino, J. B.; Dixon, T.; Evans, D. L.; Ford, J. P.; Saunders, R. S.; Breed, C. S.; Masursky, H.; McCauley, J. F.; Schaber, G. G.; Dellwig, L.; England, A.; Macdonald, H.; Martin-Kaye, P.; and Sabins, F.: Shuttle Imaging Radar Experiment. *Science*, vol. 218, no. 4576, 1982, pp. 996-1003.

Garvin J.B.; and Head, J. W.: Radar Roughness at Venus Landing Sites. (Abstract.) Lunar Planet Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 235-236.

Garvin, J. B.; and Head, J. W.: Radar Roughness at Venus Landing Sites (Abstract.). Reports of Planetary Programs, 1982, NASA TM-85127, 1982.

Garvin, J. B.; Head, J. W.; Zisk, S.; and Pettengill, G.: Venus Global Radar Roughness: A Preliminary Analysis. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 239-240.

McCauley, J. F.; Schaber, G. G.; Breed, C. S.; and Grolier, M. J.: SIR-A Images Reveal Major Subsurface Palimpsest Drainages in the Eastern Sahara: Applications to Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982.

McCauley, J. F.; Schaber, G. G.; Breed, C. S.; Grolier, M. J.; Haynes, C. V.; Issawi, Bahay; Elachi, Charles; and Blom, Ron: Subsurface Valleys and Geoarcheology of the Eastern Sahara Revealed by Shuttle Radar. *Science*, vol. 218, no. 4576, 1982, pp. 1004-1020.

Mouginis-Mark, P. J.; Zisk, S. H.; and Downs, G. S.: Ancient and Modern Slopes in the Tharsis Region of Mars. *Nature*, vol. 297, no. 5867, 1982, pp. 546-550.

Plescia, J. B.; and Saunders, R. S.: SIR-A Results From Coastal Northern California. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 314-316.

Saunders, R. S.; Thompson, T. W.; and Gratz, A. J.: Radar-Bright Rings on the Moon and Venus. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 84-86.

Schaber, G. G.: How Radar Can Improve Our Knowledge of Mars. (Abstract.) Joint Meeting, Eur. Geophys. Soc. Eur. Seismol. Com. Abstr. Programs, Univ. of Leeds (Leeds, UK), 1982, p. 126.

Schaber, G. G.; Kozak, R. C.; Davis, P. A.; and Eliason, E.: Venus Pioneer: Ratios and Composite Maps of Altimetry, RMS Slopes and the Fresnel Reflection Coefficient. Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., Pt. 2, 1982, pp. 683-684.

Schaber, G. G.; McCauley, J. F.; Breed, C. S.; Grolier, M. J.; Elachi, Charles; Blom, Ron; Issawi, Bahay; and Haynes, C. V.: Space Shuttle Radar: Dramatic Evidence of Sand Penetration in the Eastern Sahara in Egypt and Sudan. (Abstract.) Summaries, 2d Thematic Conf. Remote Sensing Explor. Geol.: Int. Remote Sensing Environ., Environmental Res. Inst. Michigan and Texas Christian Univ., 1982, pp. 197-198.

Sharpton, V. L.; Head, J. W.; Peterfreund, A. R.; and Garvin, J. B.: Topographic Characterization of Venus: Altimetry, Variance and Slope. (Abstract.) Paper submitted to Amer. Geophys. Union spring meeting, 1983.

Sharpton, V. L.; Head, J. W.; and Shorthill, R. W.: Analysis of the Apollo Lunar Sounder Experiment Data—A Progress Report. (Abstract.) Reports of Planetary Programs, 1982, NASA TM-85127, 1982.

Simpson, R. A.; and Tyler, G. L.: Radar Scattering Laws for the Lunar Surface. IEEE Trans., vol. AP-30, 1982, pp. 438-449.

Simpson, R. A.; Tyler, G. L.; Harmon, J. K.; and Peterfreund, A. R.: Radar Measurement of Small-Scale Surface Texture: Syrtis Major. Icarus, vol. 49, 1982, pp. 258-283.

Simpson, R. A.; Tyler, G. L.; and Howard, H. T.: Mars Surface Properties From Viking Bistatic Radar. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 317-318.

Simpson, R. A.; Tyler, G. L.; and Schaber, G. G.: Surface Roughness Estimates From Viking Bistatic Radar in Mars' Equatorial Region. Bull. Amer. Astron. Soc., vol. 14, 1982, p. 756.

Whitford-Stark, J. L.: Shuttle Radar Imagery of the Northern Part of the Tengchong Volcanic Area, Yunnan Province, China. Spaceborne Imaging Radar Symp., 1983.

Remote Sensing and Photometric Studies

Arvidson, R. E.; and Guinness, E. A.: Classification of Surface Units in the Equatorial Region of Mars Based on Viking Orbiter Color, Albedo, and Thermal Data. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 320-321.

Arvidson, R. E.; Guinness, E. A.; and Zent, A. P.: Classification of Surface Units in the Equatorial Region of Mars Based on Viking Orbiter Color, Albedo, and Thermal Data. J. Geophys. Res., vol. 87, 1982, pp. 10, 149-10,158.

Bell, J. F.; and Hawke, B. R.: Spectral Studies of Lunar Dark-Halo Craters. Bull. Amer. Astron. Soc., vol. 14, 1982, p. 754.

Buratti, B.; and Veverka, J.: Voyager Photometry of Europa. Paper submitted to Icarus, vol. 54, 1983.

Buratti, B.; and Veverka, J.: Voyager Photometry of Rhea, Dione, Tethys, Enceladus and Mimas. Paper submitted to Icarus, 1983.

Clark, P. E.; and Hawke, B. R.: Geochemical Variation in the Lunar Highlands East of Smythü. Trans. Amer. Geophys. Union, vol. 63, 1982, p. 1,021.

Edwards, M. H.; and Arvidson, R. E.: Spatial Resolution and Areal Coverage of Mars by the Viking Orbiter Cameras. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 385-386.

El-Baz, F.: Techniques and Results of Remote Sensing of the Moon. Int. Conf. Remote Sensing Environ., Environ. Res. Inst. Michigan (Ann Arbor), Jan. 1982, pp. 299-311.

Etchegaray-Ramirez, M. I.; Metzger, A. E.; Haines, E. L.; and Hawke, B. R.: Thorium Concentrations in the Lunar Surface: IV. Deconvolution of the Mare Imbrium, Aristarchus, and Adjacent Regions. Lunar Planet. Sci. Conf. 13, Lunar Planet. Inst., 1982, pp. 529-543.

Hawke, B. R.; and Bell, J. F.: Geologic and Remote Sensing Studies of the Schickard-Schiller Region. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 339-341.

Hawke, B. R.; and Bell, J. F.: Spectral Reflectance Studies of Dark-Haloed Impact Craters: Implications for the Composition and Distribution of Ancient Lunar Basalts. Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 287-288.

Hawke, B. R.; Lucey, P. G.; McCord, T. B.; Pieters, C. M.; and Head, J. W.: Spectral Studies of the Aristarchus Region: Implications for the Composition of the Lunar Crust. Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 289-290.

Krinsley, D. H.; and Marshall, J. R.: Particle Attrition Device for Earth and Mars. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, p. 408.

Krinsley, D. H.; and Pye, K.: Backscatter Techniques as Applied to Fine Grained Rocks, With Possible Applications to Martian and Lunar Rocks. Reports of Planetary Programs, 1982, NASA TM-85127, 1982, pp. 405-407.

Krinsley, D.; Pye, K.; and Kearsley, A.: Application of Backscattered Electron Microscopy in Shale Petrology. Geol. Mag., vol. 120, 1983, pp. 109-114.

- Lucchitta, B. K.: The Use of Images and Morphologic Analogs in Space Exploration. Int. Conf. Remote Sensing Environ., Environ. Res. Inst. Michigan (Ann Arbor), vol. 2, 1982, pp. 73–80.
- Lucey, P. G.; Hawke, B. R.; McCord, T. B.; Pieters, C. M.; and Head, J. W.: An Unusual Lunar Composition at the Aristarchus Plateau. (Abstract.) Amer. Astron. Soc., 158th Calgary Meeting, 1982.
- Lucey, P. G.; Hawke, B. R.; McCord, T. B.; Pieters, C. M.; and Head, J. W.: An Unusual Composition at the Aristarchus Plateau. Bull. Amer. Astron. Soc., vol. 14, 1982, pp. 756–757.
- Morris, R. V.; Lauer, H. V., Jr.; Gooding, J. L.; and Mendell, W. W.: Spectral Evidence and Implications for the Occurrence of Aluminous Iron Oxides on Mars. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 526–527.
- Nelson, R. M.; Pieri, D. C.; and Baloga, S. M.: Reflection Spectrum of Liquid Sulfur and Its Implication for Io. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 12.
- Pye, K.; and Krinsley, D.: Mudrocks Examined by Backscattered Electron Microscopy. Nature, vol. 301, 1983, pp. 412–413.
- Simonelli, D.: Amalthea: Implications of Temperatures Observed by Voyager. Icarus, vol. 54, 1983.
- Spencer, J.: Ganymede in the Thermal Infrared: Preliminary Analysis of Voyager IRAS Data. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, p. 731.
- Squyres, S. W.; and Sagan, C.: The Albedo Asymmetry of Iapetus. (Abstract.) Bull. Amer. Astron. Soc., vol. 7, 1982, p. 737.
- Squyres, S. W.; and Sagan, C.: The Albedo Asymmetry of Iapetus. Reports of Planetary Programs, 1982, NASA TM–85127, 1983, pp. 44–46.
- Squyres, S.; and Veverka, J.: Color Photometry of Surface Features on Ganymede and Callisto. Icarus, vol. 52, 1982, pp. 117–125.
- Squyres, S.; and Veverka, J.: Variation of Albedo With Solar Incidence Angle on Planetary Surfaces. Icarus, vol. 50, 1982, pp. 115–122.
- Thomas, P.; Veverka, J.; Morrison, D.; and Davies, M.: Phoebe: Voyager 2 Observations, Bull. Amer. Astron. Soc., vol. 14, no. 3, 1982, p. 738.
- Thomas, P.; Veverka, J.; Morrison, D.; Davies, M.; and Johnson, T. V.: Phoebe: Voyager Observations, Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 47–49.
- Williams, R. S., Jr.: Remote Sensing of Eldfell Volcano, Heimaey, Vestmannaeyjar, Iceland. Geological Applications, ch. 31 of Manual of Remote Sensing, 2d ed., Amer. Soc. Photogram., Falls Church, VA, 1983.
- Zimbelman, J. R.: Corrections for Elevation of Viking Orbiter Measurements of Martian Thermal Inertias. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 322.
- Zimbelman, J. R.; and Greeley, R.: Elevation-Dependent Corrections for Thermal Inertias on Mars. Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, p. 879.
- Zimbelman, J. R.; and Greeley, R.: Surface Properties of Ascræus Mons Obtained From IRTM Data. Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, p. 881.

Cartography, Photogrammetry, Geodesy, and Altimetry

Batson, R. M.: Jupiter by Gary Hunt and Patrick Moore and The Moon by Patrick Moore. (Invited book review.) *Sky and Telescope*, vol. 64, no. 6, 1982, pp. 557–558.

Batson, R. M.: Special Purpose Mars Mapping. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 358.

Batson, R. M.: Voyager Cartography. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 355.

Batson, R. M.; and Bridges, P. M.: Revisions of 1:5,000,000 Scale Mars Maps. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 357.

Batson, R. M.; and Davis, S. L.: Albedo Map of Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 359.

Batson, R. M.; and Tyner, R. L.: 1:2,000,000 Scale Controlled Photomosaics of Mars. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 356.

Davies, M. E.: Cartography and Nomenclature for the Galilean Satellites. *Satellites of Jupiter*, D. Morrison, ed., Univ. of Arizona Press, 1982, pp. 911–933.

Davies, M. E.: The Control Networks of Mars: September 1982. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 362.

Davies, M. E.: The Control Networks of Mimas and Enceladus, *Bull. Amer. Astron. Soc.*, vol. 14, no. 3, 1982, p. 737.

Davies, M. E.: The Control Networks of the Satellites of Jupiter and Saturn. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 360–361.

Davis, P. A., et al.: Rapid Estimation of Martian Topography From Viking Orbiter Image Photometry. Reports of Planetary Programs, 1982, NASA TM–85127.

Lucchitta, B. K.: The Galilean Satellite Geological Mapping Program, Continued. (Abstract.) Reports of Planetary Programs, 1982, NASA TM–85127, 1982, p. 397.

Masursky, Harold: Surveying the Solar System. *The Dynamic Universe*, Theodore P. Snow, ed., West Publishing Co., New York, 1983, pp. 274–275.

Scott, D. H.: Mariner and Viking Contributions to Geologic Mapping of Mars. *Geol. Soc. Amer. Abstr. Programs*, vol. 14, no. 7, 1982, p. 613.

Wu, S. S. C.: The Completion of Photogrammetric Compilation of the Global Topographic Map of the Moon. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 373–375.

Wu, S. S. C.: Geometric Corrections of Side-Looking Radar Images. 49th Annual Meeting, Amer. Soc. Photogram., Amer. Congr. Surv. (Washington, DC), 1983, pp. 354–364.

Wu, S. S. C.: Interactive Data Reduction for Images From Facsimile Cameras. *Int. Soc. Photogram. Remote Sensing, Com. V* (York, England), *Int. Arch. Photogram.*, vol. 24, no. V/13, 1982.

- Wu, S. S. C.: Interpretation of Remote Sensing Data for Planetary Topographic Mapping. Int. Soc. Photogram. Remote Sensing, Com. VII (Toulouse, France), Int. Arch. Photogram., vol. 24, no. VII/1, 1982, p. 85.
- Wu, S. S. C.: Lunar and Planetary Topographic Mapping. (Abstract.) Lunar Planet. Sci. Conf. 14, Lunar Planet. Inst., 1983, pp. 867–868.
- Wu, S. S. C.: Mapping Precision of the Viking Lander Images. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 363–366.
- Wu, S. S. C.: Remote Sensing for Planetary Topographic Mapping. Int. Soc. Photogram. Remote Sensing, vol. 24, no. VII/2, 1982, pp. 25–31.
- Wu, S. S. C.: The Solution of the Layover Problem of Side-Looking Radar Images. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 370–372.
- Wu, S. S. C.: Topographic Mapping of Extraterrestrial Bodies. (Abstract.) Int. Symp. Computer Assisted Cartography Int. Soc. Photogram. Remote Sensing, Com. IV—Cartographic and Data Bank Application of Photogrammetry and Remote Sensing (Crystal City, VA), 1982, p. 83.
- Wu, S. S. C.; Elassal, A. A.; Jordan, Raymond; and Schafer, F. J.: Photogrammetric Application of Viking Orbital Photography. Planet. Space Sci., vol. 30, no. 1, 1982, pp. 45–55.
- Wu, S. S. C.; and Schafer, F. J.: Photogrammetry of the Viking Lander Imagery. Photogrammetric Engineering and Remote Sensing, Amer. Soc. Photogram. Remote Sensing, vol. 48, no. 5, 1982, pp. 803–816.
- Wu, S. S. C.; and Schafer, F. J.: Planetwide Control Network of Mars. Reports of Planetary Programs, 1982, NASA TM–85127, 1982, pp. 367–369.

Author Index

- Adams, J. B., 6
 Allen, C. C., 10
 Allison, M. L., 8
 Arvidson, R. E., 1, 7, 18, 24
 Ashwal, L. D., 3
 Atallah, C., 3
 Aubele, J. C., 13
- Baker, V. R., 16, 18
 Baloga, S. M., 13, 14, 25
 Banerdt, W. B., 7, 20
 Barrow, J., 3
 Basilevsky, A. T., 1
 Baskerville, C. A., 1, 16
 Batson, R. M., 2, 26
 Beebe, R., 2
 Bell, J. F., 10, 24
 Berlin, G. L., 22
 Billingsley, G. H., 19
 Black, D. C., 21
 Blom, R., 22
 Bodart-Jourdain, J., 5
 Bolef, L. K., 1
 Booth, M. C., 20
 Boothroyd, J. C., 16, 21
 Bousquet, B., 5
 Boyce, J. M., 2, 11
 Brakenridge, G. R., 16
 Bratt, S. R., 8
 Breed, C. S., 18, 19, 22
 Bridges, P., 2, 26
 Briggs, G. A., 2
 Brown, W. E., 22
 Bullard, T. F., 6
 Bunker, A., 2
 Buratti, B., 24
 Bus, E. H., 3
 Bus, S. J., 3, 4
 Bustin, R., 16, 20
- Campbell, D. B., 5
 Caper, A. P., 16
 Carr, M. H., 1, 7, 13, 20
 Casacchia, R., 5, 11
 Casadevall, T. J., 13
 Cassen, P. M., 6, 8, 9
 Chicarro-Fernandez, A., 7
 Child, J., 3
 Cimino, J. B., 22
 Cintala, M. J., 21
 Clark, P. E., 22, 24
 Clegg, R. H., 16
- Clifford, S. M., 16, 18, 20, 21
 Clow, G. D., 10, 11
 Colburn, D. S., 2
 Collins, S. A., 2
 Comer, R. P., 7, 11
 Condit, C. D., 6, 13
 Cook, A. F., 2
 Criswell, C. W., 13
 Cruikshank, D., 3
 Crumpler, L. S., 13
 Cutts, J. A., 20
 Cuzzi, J. N., 2, 7
- Danielson, G. E., 2
 Davies, M. E., 2, 25, 26
 Davis, P. A., 8, 11, 22, 26
 Davis, S. L., 26
 Dawe, J., 3
 De Hon, R. A., 5, 13, 20
 Dejewij, J., 3
 Dellwig, L., 22
 De Rita, D., 13
 Dixon, T., 22
 Donahue, T. M., 20
 Downs, G. S., 22
 Dunbar, R. S., 3, 4
 Dyal, P., 2
 Dzurisin, D., 13, 14
- Economou, H., 13
 Edwards, M. H., 24
 Ehmann, W. J., 5
 Elachi, C., 22
 Ellassal, E. E., 27
 El-Baz, F., 1, 12, 18, 24
 Eliason, E., 8, 22
 Elston, W. E., 10, 13
 England, A., 22
 Eppler, D. B., 16, 17
 Etchegaray-Ramirez, M. I., 24
 Evans, D., 6, 22
- Fanale, F. P., 20
 Ferguson, H. M., 17
 Fernandez-Chicarro, A., 7
 Fink, J. H., 10
 Fleitout, L., 10, 15
 Ford, J. P., 22
 Francis, P., 13
 French, L., 3
 Frey, H., 13, 16

Garvin, J. B., 1, 13, 14, 18, 22
 Gault, D. E., 10
 Gibson, E. K., 16, 20, 21
 Giegengack, R. F., 2, 4
 Goldstein, A. G., 5
 Golombek, M. P., 5
 Gooding, J. L., 10, 20, 25
 Gratz, A. J., 22
 Greeley, R., 1, 5, 6, 10, 14, 18, 19, 25
 Grieve, R. A. F., 10
 Grimm, R. E., 7
 Grolier, M. J., 18, 19, 22
 Guest, J. E., 5, 10
 Guinness, E. A., 1, 7, 18, 24
 Gustavson, T. C., 16
 Gurnis, M., 12

 Haberle, R. M., 2
 Haines, E. L., 24
 Hale, W., 10
 Hall, J. L., 7
 Hansen, C. J., 2
 Harmon, J. K., 23
 Hartley, M., 3
 Hartmann, W. K., 3, 10
 Hawke, B. R., 6, 10, 12, 14, 24, 25
 Haynes, C. V., 22
 Head, J. W., 1, 5, 6, 7, 8, 9, 10, 11, 14, 22, 23, 24, 25
 Helfenstein, P., 1
 Helin, E. F., 3, 4
 Helm, P. J., 19
 Hillel, D., 16, 20
 Hiller, K., 5
 Hokanson, S. A., 16
 Horner, V., 10
 Hörz, F., 21
 Howard, H. T., 23
 Howell, E., 4
 Huguenin, R. L., 1, 6, 16, 20, 21
 Hulkower, N. D., 4
 Hunt, G. E., 2

 Inge, J., 2
 Ingersoll, A., 2
 Issawi, B., 22
 Iverson, J. D., 18
 Ivins, E. R., 7
 Jackson, R. W., 2
 Jakosky, B., 20
 Jarosewich, M., 13
 Jercinovic, M., 6
 Johansen, L. A., 16, 20
 Johnson, T. V., 2, 25
 Jordan, R., 27
 Jourdain-Bodart, J., 5

 Kandil, Ahmed, 19
 Kearsley, A., 24
 Keil, K., 10
 Kirk, R. L., 7
 Kochev, R. C., 16
 Komar, P. D., 17
 Kotra, R. K., 20, 21

 Kozak, R. C., 8, 22
 Krinsley, D. H., 15, 18, 24, 25

 Lauer, H. V., 25
 Leach, R. N., 18, 19
 Lee, S. W., 19
 Leff, C. E., 1
 Leschine, S. B., 1
 Lis, C. J., 16
 Lissauer, J. J., 7
 Lozinsky, R. P., 6
 Lucchitta, B. K., 6, 17, 21, 25, 26
 Lucey, P. G., 24, 25
 Lyzenga, G. A., 7

 McCauley, J. F., 18, 19, 22
 McCord, T. B., 6, 24, 25
 McCrory, T. A., 6
 Macdonald, H., 22
 McGill, G. E., 6
 McKay, D. S., 20
 MacKinnon, D. J., 19
 McQueen, R. G., 15
 Mainguet, M., 19
 Malin, M. C., 8, 10, 14, 16, 17
 Malvin, D. J., 4
 Marshall, J. R., 13, 18, 19, 24
 Martin, M. D., 1
 Martin-Kaye, P., 22
 Masson, Ph., 7, 8, 9, 11, 15
 Matson, D. L., 13
 Masursky, H., 1, 2, 7, 22, 26
 Maxwell, T. A., 1, 8, 9, 18
 Melosh, J. H., 6
 Mendell, W. W., 4, 25
 Metzger, A. E., 24
 Miller, K. J., 1
 Mitchell, J. L., 2
 Moore, H. J., 14, 17, 19
 Moore, J. G., 15
 Moreau, C., 19
 Morgan, D., 3
 Morris, E. C., 6, 14, 15
 Morris, R. V., 25
 Morrison, D., 2, 25
 Mougini-Mark, P. J., 6, 7, 14, 21, 22
 Murphy, J. P., 2

 Nelson, R. M., 14, 25

 Olsen, J. W., 2
 Owen, T., 2

 Parmentier, E. M., 8
 Parker, T., 17
 Passey, Q. R., 4
 Patton, P. C., 17
 Peale, S. J., 6, 7, 8, 9
 Peterfreund, A. R., 5, 19, 22, 23
 Pettengill, G., 22
 Peyronneau, J., 8
 Phillips, R. J., 7
 Pieri, D. C., 5, 13, 14, 17, 25

- Pieters, C. M., 6, 24, 25
Pike, R. J., 10, 11
Pilcher, C. B., 14
Plescia, J. B., 6, 8, 11, 22
Poirier, J. P., 8
Pollack, J. B., 2, 18, 20, 21
Potter, D. B., Jr., 6
Pye, K., 24, 25
- Quimby, L., 3
- Raefsky, A., 7
Reynolds, R. T., 2, 6, 8, 9
Roddy, D. J., 11
Roe, D. A., 2
Rogeeon, P., 5
Rose, D. E., 6
Roth, L. E., 14
Runyon, C. J., 16
Russell, K., 3
Ruzick, A., 11
- Sabins, F., 22
Sagan, C., 2, 11, 25
Salvail, J. P., 20
Saunders, R. S., 1, 7, 8, 14, 20, 22
Savage, A., 3
Schaber, G. G., 8, 22, 23
Schafer, F. J., 27
Schmidt, R. S., 21
Schneider, N. M., 15
Schultz, P. H., 7
Schultz, R. A., 8
Schuver, H., 15
Scott, D. H., 6, 14, 17, 26
See, T. H., 21
Semeniuk, A. M., 13
Sharpton, V. L., 6, 8, 22, 23
Sheridan, M. F., 2, 11, 13, 14, 15
Shoemaker, C. S., 3, 4
Shoemaker, E. M., 2, 3, 4, 6
Shorthill, R. W., 23
Shu, Liu, 19
Simmons, D. W., 16
Simonelli, D., 25
Simpson, R. A., 23
Singer, R. B., 6
Sjogren, W. R., 8
Sleep, N. H., 7
Smith, B. A., 2
Soderblom, L. A., 2, 6, 11
- Solomon, S. C., 7, 8, 9, 11
Sotin, C., 8
Spencer, J. R., 11, 21, 25
Spudis, P. D., 5, 11
Squyres, S. W., 2, 6, 7, 8, 9, 11, 25
Stephens, S. K., 9, 11
Stevenson, D. J., 7, 15
Strickland, E. L., 19
Strom, R. G., 2, 5, 11, 12, 13, 15
Suomi, V. E., 2
- Tanaka, K. L., 11, 14, 17
Terrile, R. J., 2
Thomas, P. G., 9, 10, 11, 15, 19, 25
Thompson, T. W., 22
Thorarinsson, S., 15
Toon, O. B., 21
Touzeau, J. F., 9
Treat, C., 19
Tyler, G. L., 23
Tyner, R. L., 26
- Underwood, J. R., Jr., 2, 4, 6, 15, 19
Urbancic, M. A., 21
- Veverka, J., 2, 3, 19, 24, 25
- Walker, A. S., 12, 19, 22
Wall, S. D., 2, 19
Warner, J. L., 3
Watters, T. R., 9
Wells, S. G., 6
Wentworth, S. J., 16, 20
White, B. R., 18, 19
Whitford-Stark, J. L., 6, 12, 14, 15, 23
Wilhelms, D. E., 2, 6, 12
Williams, J. G., 3
Williams, R. S., Jr., 2, 6, 15, 25
Williams, S. H., 18, 19
Wilson, L., 14
Wise, D. U., 5, 6, 9
Witbeck, N. E., 6, 15
Wohletz, K. H., 14, 15
Wood, C. A., 3, 4, 13, 15, 17
Woronow, A., 11, 12
Wu, S. S. C., 26, 27
- Zent, A. P., 24
Zimbelman, J. R., 6, 25
Zisk, S. H., 5, 6, 21, 22
Zuber, M. T., 1

1. Report No. NASA TM-86249		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle A BIBLIOGRAPHY OF PLANETARY GEOLOGY PRINCIPAL INVESTIGATORS AND THEIR ASSOCIATES, 1982-1983				5. Report Date August 1984	
				6. Performing Organization Code EL-4	
7. Author(s) J. B. Plescia, Compiler				8. Performing Organization Report No.	
				10. Work Unit No.	
9. Performing Organization Name and Address Planetology and Oceanography Section Jet Propulsion Laboratory California Institute of Technology Pasadena, CA 91109				11. Contract or Grant No.	
				13. Type of Report and Period Covered Technical Memorandum	
12. Sponsoring Agency Name and Address Office of Space Science and Applications National Aeronautics and Space Administration Washington, DC 20546				14. Sponsoring Agency Code	
15. Supplementary Notes					
16. Abstract This document is a compilation of selected bibliographic data specifically relating to recent publications by principal investigators and their associates, supported through NASA's Office of Space Science and Applications, Earth and Planetary Exploration Division, Planetary Geology Program. It serves as a companion piece to NASA TM-85127, "Reports of Planetary Programs, 1982," NASA, Washington, DC 20546.					
17. Key Words (Suggested by Author(s)) Planetary geology Bibliography Solar system			18. Distribution Statement Unclassified—Unlimited Subject Cat. 88		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 32	
				22. Price A03	

National Aeronautics and
Space Administration

Washington, D.C.
20546

Official Business

Penalty for Private Use, \$300

THIRD-CLASS BULK RATE

Postage and Fees Paid
National Aeronautics and
Space Administration
NASA-451



NASA

POSTMASTER: If Undeliverable (Section 158
Postal Manual) Do Not Return
